

ORDER FOR SUPPLIES OR SERVICES							PAGE OF PAGES	
							1	12
IMPORTANT: Mark all packages and papers with contract and/or order numbers.								
1. DATE OF ORDER 08/18/2020		2. CONTRACT NO. (If any)			6. SHIP TO:			
					a. NAME OF CONSIGNEE Christy Lambright (919-541-4851)			
3. ORDER NO. 68HE0B20P0404		4. REQUISITION/REFERENCE NO. PR-ORD-20-01701						
5. ISSUING OFFICE (Address correspondence to) Billy Sahli (850-934-9267) US Environmental Protection Agency 1 Sabine Island Drive Gulf Breeze FL 322561					b. STREET ADDRESS US Environmental Protection Agency 109 T.W. Alexander Drive			
					c. CITY Research Triangle Park		d. STATE NC	e. ZIP CODE 27711
7. TO: Joel McComb					f. SHIP VIA Best Way			
a. NAME OF CONTRACTOR BioSpyder Technologies, Inc.					8. TYPE OF ORDER			
b. COMPANY NAME					<input checked="" type="checkbox"/> a. PURCHASE REFERENCE YOUR: Quote #: 1258 Dated: 06/18/20 Please furnish the following on the terms and conditions specified on both sides of this order and on the attached sheet, if any, including delivery as indicated.		<input type="checkbox"/> b. DELIVERY Except for billing instructions on the reverse, this delivery order is subject to instructions contained on this side only of this form and is issued subject to the terms and conditions of the above-numbered contract.	
c. STREET ADDRESS 5922 Farnsworth Ct Ste 102								
d. CITY Carlsbad			e. STATE CA	f. ZIP CODE 920087398				
9. ACCOUNTING AND APPROPRIATION DATA See Schedule					10. REQUISITIONING OFFICE ORD-CPHEA-PHITD-RDTB			
11. BUSINESS CLASSIFICATION (Check appropriate box(es)) <input checked="" type="checkbox"/> a. SMALL <input type="checkbox"/> b. OTHER THAN SMALL <input type="checkbox"/> c. DISADVANTAGED <input type="checkbox"/> d. WOMEN-OWNED <input type="checkbox"/> e. HUBZone <input type="checkbox"/> f. SERVICE-DISABLED VETERAN-OWNED <input type="checkbox"/> g. WOMEN-OWNED SMALL BUSINESS (WOSB) ELIGIBLE UNDER THE WOSB PROGRAM <input type="checkbox"/> h. EDWOSB							12. F.O.B. POINT	
13. PLACE OF			14. GOVERNMENT B/L NO.		15. DELIVER TO F.O.B. POINT ON OR BEFORE (Date) 11/03/2020		16. DISCOUNT TERMS NET 30	
a. INSPECTION Destination		b. ACCEPTANCE Destination						
17. SCHEDULE (See reverse for Rejections)								
ITEM NO. (a)	SUPPLIES OR SERVICES (b)			QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	DUNS Number: 078410758 TempO-SeqR Assay and Analysis PRIMARY EPA POC: Christy Lambright (919-541-4851); Continued ...							
SEE BILLING INSTRUCTIONS ON REVERSE	18. SHIPPING POINT		19. GROSS SHIPPING WEIGHT		20. INVOICE NO.			
	21. MAIL INVOICE TO:							
	a. NAME		RTP Finance Center				\$20,213.70	
	b. STREET ADDRESS (or P.O. Box)		US Environmental Protection Agency RTP-Finance Center (AA216-01) 109 TW Alexander Drive www2.epa.gov/financial/contracts				\$20,213.70	
	c. CITY		d. STATE	e. ZIP CODE				
Durham		NC	27711					
22. UNITED STATES OF AMERICA BY (Signature)					08/18/2020		23. NAME (Typed) William P. Sahli TITLE: CONTRACTING/ORDERING OFFICER	

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
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DATE OF ORDER
08/18/2020

CONTRACT NO.

ORDER NO.

68HE0B20P0404

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<p>Lambright.christy@epa.gov</p> <p>Christy Lambright is the individual with delegated authority by the Contracting Officer to approve payment of invoice.</p> <p>ADVANCED PAYMENTS ARE NOT AUTHORIZED.</p> <p>InvoiceApprover: Christy Lambright Admin Office: Agnes Choate (919-541-2579) US Environmental Protection Agency 109 TW Alexander Drive RTP NC 27711</p> <p>Accounting Info: 20-21-C-26D3000-000FK9XR6-2532-26A5C-2026D3C014-001 BFY: 20 EFY: 21 Fund: C Budget Org: 26D3000 Program (PRC): 000FK9XR6 Budget (BOC): 2532 Cost: 26A5C DCN - Line ID: 2026D3C014-001</p>					
0001	<p>TempO-SeqR Assay and Analysis in accordance with the Statement of Work (SOW).</p> <p>1) TempO-SeqR (b)(4) Services (b)(4) Includes standard control RNA samples supplied by BioSpyder. Includes assay processing and sequencing. -Activity #: SE-05-001 -QTY: (b)(4) -Total Cost: (b)(4)</p> <p>2) TempO-SeqR Primary Data Analysis. Includes initial alignment, QC, and count table output. -Activiy #: SE-89-002 -QTY: (b)(4) -Total Cost: (b)(4)</p> <p>3) TempO-SeqR Project Access for samples -Activity #: SE-89-04 -QTY: (b)(4) -Total Cost: (b)(4)</p> <p>Continued ...</p>	1	EA	20,213.70	20,213.70	

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$20,213.70

ORDER FOR SUPPLIES OR SERVICES
SCHEDULE - CONTINUATION

PAGE NO
3

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DATE OF ORDER
08/18/2020

CONTRACT NO.

ORDER NO.

68HE0B20P0404

ITEM NO. (a)	SUPPLIES/SERVICES (b)	QUANTITY ORDERED (c)	UNIT (d)	UNIT PRICE (e)	AMOUNT (f)	QUANTITY ACCEPTED (g)
	<p>Please mark packing slip(s)/invoice with PO# 68HE0B20P0404 and attn: Christy Lambright.</p> <p>Please send invoice to RTP Finance Center(See Block 21) or E-mail to RTPReceiving@epa.gov.</p> <p>E-mail a copy of invoice to choate.agnes@epa.gov.</p> <p>To check for status of payment contact RTP-FC Customer Service Number (919)541-1148; email RTPFC-CustomerService@epa.gov</p>					

TOTAL CARRIED FORWARD TO 1ST PAGE (ITEM 17(H))

\$0.00

Statement of Work
07/24/20

Effects of NBP2 following in utero exposure in the rat
FPS Blocks 140, 143, 144

SECTION I– DESCRIPTION OF WORK

A. Background

In these studies, we are evaluating the toxicity a single PFAS chemical: Nafion byproduct 2 or NBP2 (7H-Perfluoro-4-methyl-3,6-dioxaoctanesulfonic acid, CAS 749836-20-2). NBP2 is in a class of perfluoroalkyl ether acids that have been used as substitutes for other PFAS compounds in the manufacture of high-performance fluoropolymers. These have become a concern to North Carolina due to its presence in water. As requested, EPA is working to provide data on this chemical due to critical data gaps and concerns regarding possible developmental toxicity and potential carcinogenic activity. There is limited information on this chemical's usage as it is unregulated, to date. NBP2 was administered to pregnant rats from gestation day (GD) 14 to 18 by oral gavage with doses of 0, 0.1, 0.3, 1, 3, 10, and 30 mg/kg/d (water is the vehicle). Livers were collected from each dam and one rodent pup per litter on GD18, stored in trizol at -80C until RNA was extracted using chloroform and isopropanol then reconstituted in RNase-free water.

B. Contractor Requirements

Objective:

The objective of this work is to provide targeted gene sequencing on a set of 90 liver samples using the TempO-Seq® whole-genome targeted sequencing assay.

Scope/Requirements:

1. EPA shall provide 90 RNA extracted in house samples, stored and shipped appropriately to the vendor within three (3) weeks from award of contract.
2. The vendor shall process using their proprietary direct lysate protocol and run the whole genome multiplexed panel on a gene sequencing platform using their established protocols for rat genome analysis (dynamic range approx. 1E4). Prior to the actual sequencing run, a qPCR assay is run on the lysate to guarantee amplification ability.
3. Sequencing run results shall be provided to EPA in FastQ file format.
4. The following QA/QC and analysis outputs shall be carried out by the vendor and provided to EPA with the run information:
 - a. Positive controls samples, run in triplicate on each plate (species specific, provided by contractor)

- b. Negative control samples, run in triplicate on each plate (no sample input, provided by contractor) to ensure low background levels and lack of contamination
- c. Read count analysis with the following metrics

Description	Metric	Significance
Total # mapped reads in positive controls	Pass (>10,000 mapped reads)	Sufficient number of reads to accurately analyze
% mapped reads in positive controls	Pass (>80%)	
Signal to noise ratio (#mapped reads in positive vs negative controls)	Pass (>20:1)	Sufficient read quality for statistical significance
Average reads per expressed targets	Pass (>250)	Read depth measure that reflects overall time expressed genes were counted. 250-500 is considered good for TempO-Seq assay run.

5. Real-time traces of the TempO-Seq library generation
Summary sequencing output files for each run with standard metrics (Density, Clusters, Reads, %Reads and % \geq Q30)
6. The final report on QA/QC and data from the runs is due within two months of sample receipt.
7. All work shall be carried out at the contractor's place of business.
8. There is no travel required in this contract.

Technical Point of Contact:

Christy Lambright
US Environmental Protection Agency
109 TW Alexander Drive
Durham, NC 27711
Phone: 919 541 4851